National Aeronautics and Space Administration

NASA's Strategic Capabilities Assets Program

NASA GODDARD SPACE FLIGHT CENTER
FACILITY 225 THERMAL VACUUM CHAMBER

Facility 225 at the Goddard Space Flight Center (GSFC) is a horizontal loading thermal vacuum test chamber used for thermal vacuum and thermal balance testing, as well as for the bakeout of large test items. Electrical feedthroughs and liquid and gas penetrations are provided on the front, sides, and rear of the chamber. A clean tent covering the door opening provides a class 10,000 clean area for integrating hardware prior to loading it into the chamber.

TECHNICAL SPECIFICATIONS

Test pressure	1 x 10^{-7} Torr
Shroud temperature GN_2 mode	-140 °C to 150 °C
LN_2 mode	-190 °C
Chamber pumping speed	4.0 x 10^4 liters/second
Turbomolecular pump	1,000 liters/second

PHYSICAL CHARACTERISTICS

Test volume	2.74 meters in diameter x 4.27 meters long
Payload support	2,268 kilograms
Instrumentation ports	6 ports at 28 centimeters in diameter

INTEGRAL INSTRUMENTATION

Pressure	Capacitance manometer (2)
	–Atm to 1 x 10^{-3} Torr
	Ion gauge 10^{-3} Torr to ultimate
Payload temperature	320 channels of thermocouples
Contamination monitor	2 TQCMs, coldfinger, residual gas analyzer, scavenger plate

CONTACT INFORMATION

Ed Packard
NASA Goddard Space Flight Center
(301) 286-8747
E-mail: *Ed.Packard@nasa.gov*